

Inventor: Chancellor et al.
Serial No.: 01/019066
Attny Dkt. No. 100349.0055US1

Art Unit: not yet assigned
Examiner: not yet assigned

REMARKS

Claim Amendments

The claim amendments contained herein are fully supported by the specification as filed, particularly by figure 5, and by page 4, lines 4-10. No new matter was added.

ATTACHED MARKED-UP VERSION OF CHANGES

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

REQUEST FOR ALLOWANCE

Claims 1-18 are pending in this application. The applicant requests allowance of all pending claims.

Respectfully submitted,

Rutan & Tucker, LLP

By: 

David Zoetewey
Reg. No. 45,258

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Attorneys for Applicant(s)
611 Anton Boulevard, Fourteenth Floor
Costa Mesa, CA 92626-1998
Tel: (714) 641-5100
Fax: (714) 546-9035

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VERSIONS WITH MARKING TO SHOW CHANGES MADE

In the Claims

Claims 4-5 were canceled, claim 18 was added, and claims 1, 2, 6, and 17 were amended as follows:

1. A filtration system comprising:
 an elongated outer casing defining an outer lumen;
 a plurality of elongated inner casings disposed within the outer lumen, each of the inner casings having an inner lumen in which is disposed an upstream filter and a downstream filter, each of the inner casings also having an upstream inlet positioned upstream of the upstream filter, and a downstream inlet positioned downstream of the upstream filter and upstream of the downstream filter; and
 the outer casing, inner casings, and filters disposed relative to one another to define a feed fluid flow path in which a feed fluid that entered an inner casing via an upstream inlet and is exiting from an upstream filter into a downstream filter is diluted by additional feed fluid flowing into the inner casing through a downstream inlet a pressure-reducing restriction orifice.
2. The filtration system of claim 1 wherein the ~~additional feed fluid passes to the downstream filter by flowing from the outer lumen through an opening in one of the inner casings~~ downstream inlet of an inner casing is a pressure reducing orifice adapted to cooperate with one or more other inlets to cause 50%-70% of feed fluid flowing through the inner casing to enter the upstream filter.
3. The filtration system of claim 2 wherein the opening is dimensioned to produce a maximum operational pressure drop of about 20%.
4. ~~The filtration system of claim 1 wherein each of the inner casings contains a plurality of the filters.~~

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- ~~5. The filtration system of claim 1 wherein the plurality of filters in at least one of the inner casings is serially disposed to provide a substantially continuous core space.~~
6. The filtration system of claim ~~5~~1 further comprising a manifold fluidly coupling the inner lumen of each of the inner casings, and another manifold fluidly coupling the core space of each of the inner casings.
7. The filtration system of claim 6 having opposite ends, and both of the manifolds extending from the same one of the opposite ends.
8. The filtration system of claim 1 wherein at least one of the inner casings contains a plurality of the filters serially disposed to provide a substantially continuous core space, and wherein a permeate flow path extends through the substantially continuous core space.
9. The filtration system of claim 8 wherein the serial disposition of the filters in at least one of the inner casings defines a substantially continuous annular space between an inner wall of each of the inner casings and the filters disposed within the inner casings.
10. The filtration system of claim 1 wherein at least one of the filters is spiral wound.
11. The filtration system of claim 1 wherein at least one of the filters comprises hollow fiber membranes.
12. The filtration system of claim 1 further comprising an energy recovery device that derives energy from a waste fluid in the waste fluid flowpath.
13. The filtration system of any one of claim 1 wherein the outer casing is disposed substantially above ground.
14. The filtration system of claim 1 having a coupling/filter ratio $\leq 1:2$.
15. The filtration system of claim 1 having a coupling/filter ratio $\leq 1:3$.
16. The filtration system of claim 1 having a coupling/filter ratio $\leq 1:4$.

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17. A filtration system comprising:
an elongated outer casing defining an outer lumen; and
a plurality of elongated inner casings disposed within the outer lumen, at least one of the inner casings having an inner lumen in which is disposed an upstream and a downstream filter, such that substantially all of a waste fluid exiting the upstream filter is directed as a feed fluid into the downstream filter, and is supplemented by additional feed fluid entering the inner lumen at a point between the upstream filter and downstream filter.
18. The filtration system of claim 17 wherein 50%-70% of any feed fluid entering the at least one of the inner casings enters the inner casing upstream of the upstream filter, and 50%-30% of the feed fluid entering the same inner casing enters at a point downstream of the upstream filter.